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PATENT
Serial No. 09/436,920

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**APPEAL FROM THE EXAMINER TO THE
BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of: Shriniwas Lohia
Serial No.: 09/436,920
Filing Date: November 9, 1999
Group Art Unit: 2141
Examiner: Adnan M. Mirza
Title: SYSTEM FOR COMMUNICATING MANAGEMENT
INFORMATION AND METHOD OF OPERATION

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Technology Center 2100

Box BOARD OF APPEALS AND INTERFERENCES

Honorable Assistant Commissioner

for Patents

Washington, D.C. 20231

Dear Sir:

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BOARD OF PATENT APPEALS
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APPEAL BRIEF

Applicant appeals to the Board of Patent Appeals and Interferences from the decision of the Examiner mailed September 6, 2002 finally rejecting Claims 1-20 in the above-identified patent application. Applicant filed a Notice of Appeal on January 6, 2003. This Appeal Brief is being filed pursuant to the provisions of 37 C.F.R. § 1.192. Applicant respectfully submits herewith this Appeal Brief, in triplicate, and a check in the amount of \$320.00 to cover the statutory filing fee.

REAL PARTY IN INTEREST

The present application was assigned to Cisco Technology, Inc., as indicated by the assignment from the inventor to Cisco Technology, Inc. recorded November 9, 1999 in the Assignment Records of the United States Patent and Trademark Office at Reel 010382, Frame 0608.

RELATED APPEALS AND INTERFERENCES

There are no known appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in this pending appeal.

STATUS OF CLAIMS

Claims 1-20 stand rejected pursuant to a Final Office Action mailed September 6, 2002. Claims 1-20 are all presented for appeal.

STATUS OF AMENDMENTS

Applicant filed a Response Pursuant to 37 C.F.R. §1.111 on June 25, 2002 in response to an Office Action dated May 31, 2002 ("First Office Action"). The Examiner finally rejected Claims 1-20 in a Final Office Action dated September 6, 2002 ("Final Office Action") and Applicant filed a Response Pursuant to 37 C.F.R. §1.116 on September 30, 2002. Applicant filed a Notice of Appeal on January 6, 2003 in response to an Advisory Action mailed October 18, 2002 ("Advisory Action"). Consequently, the claims which are on appeal, and which appear in Appendix A of this Appeal Brief, represent the form of the claims as of the time the Final Office Action was issued on September 6, 2002.

SUMMARY OF INVENTION

Referring to Figure 1, a management system 10 includes a management card 12 coupled to a number of interface cards 14 using links 16 and coupled to a client 18 using a link 20. In general, client 18 handles the primary management responsibilities for each of interface cards 14 and/or associated network devices 24 using management card 12.

Management card 12 comprises any suitable combination of hardware and software components that establish one or more communication links 22 between client 18 and one or more interface cards 14 selected in response to a command 40, and communicate management information 42 to the interface cards 14 using communication links 22. A communication link 22 comprises any switched communication path that couples client 18 to an interface card 14 and communicates management information 42 using any suitable communication protocols, standards, and/or formats. Command 40 comprises information selecting one or more of interface cards 14 and/or network devices 24 to which management information 42 is directed.

Each interface card 14 comprises any suitable combination of hardware and software components that enable network devices 24 to communicate with various components of a communication network (not explicitly shown) and with other components of system 10. For example, interface cards 14 include management ports 26 that couple network devices 24 to management card 12 using links 16 such that devices 24 may communicate with management card 12. Network devices 24 comprise computers, servers, workstations, IP telephones, routers, bridges, switches, gateways, hubs, and any other suitable electronic devices that may be managed by client 18 using management card 12.

Links 16 comprise any suitable communication paths between management card 12 and interface cards 14. Management card 12, interface cards 14, and network devices 24 generally reside in a single housing, rack mount, or chassis 28 at a particular location in management system 10.

Client 18 comprises a computer, a workstation, a console, a terminal, or any other suitable processing device that supports the management operations of interface cards 14 and/or network devices 24. Client 18 may execute software associated with management card 12 to perform the management operations of system 10. In one embodiment, client 18 couples locally to management card 12 of chassis 28 using link 20. In another embodiment, client 18 couples remotely to management card 12 of chassis 28 using link 20 and a modem 30. Link 20 comprises any suitable communication path that couples management card 12 to client 18.

In operation, a user operates client 18 to communicate a command 40 and management information 42 to management card 12. Management card 12 receives command 40 communicated by client 18 and establishes one or more communication links 22 between client 18 and particular interface cards 14 selected in response to command 40. Using communication links 22, management card 12 communicates to the particular interface cards 14, the management information 42 communicated by client 18.

A particular advantage of the present invention is that one client 18 may manage many network devices 24 using management card 12. In this respect, management system 10 provides centralized management services to many network devices 24 of a particular chassis 28 using a single point of entry, such as management card 12. The configuration and operation of components in system 10 ameliorates a problem with prior management systems that require each network device 24 to maintain a dedicated communication link to a dedicated client 18 in a one-to-one configuration. System 10 therefore results in decreased costs and complexity in managing network devices 24.

STATEMENT OF THE ISSUES

1. Are Claims 1, 3, 5-7, 9, 10, 12, 14, 16, 17, and 19 unpatentable under 35 U.S.C. §103(a) over U.S. Patent No. 6,192,414 issued to Horn ("*Horn*") and in view of U.S. Patent No. 6,230,181 issued to Mitchell et al. ("*Mitchell*")?
2. Are Claims 2, 4, 8, 11, 13, 15, 18, and 20 unpatentable under 35 U.S.C. §103(a) over *Horn*, *Mitchell*, and in view of U.S. Patent No. 6,393,483 issued to Latif et al. ("*Latif*")?

GROUPING OF CLAIMS

Pursuant to 37 C.F.R. §1.192(c)(7), Applicant states that Claims 1-20 do not stand or fall together. Applicant requests that Claims 1-20 be grouped as follows for purposes of this appeal:

1. Group 1: Claims 1, 4-5, 7, 10-12, 14, 16, and 18-19. (Claim 1 will be addressed below and Claims 4-5, 7, 10-12, 14, 16, and 18-19 may be deemed to stand or fall with Claim 1).
2. Group 2: Claims 2, 8, and 15. (Claim 2 will be addressed below and Claims 8 and 15 may be deemed to stand or fall with Claim 2).

3. Group 3: Claims 3, 6, 9, 13, 17, and 20. (Claim 3 will be addressed below and Claims 6, 9, 13, 17, and 20 may be deemed to stand or fall with Claim 3).

ARGUMENT

Issues 1 and 2 concern obviousness art rejections maintained by the Examiner. Section A reviews the legal standards to be used by the Examiner in maintaining these rejections. Applicant addresses issues 1 and 2 in Sections B-D.¹

A. Legal Standard – Obviousness

The Examiner maintains that claims 1-20 are obvious in view of the cited references. The determination of whether an invention is obvious in view of prior art considers “if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains.” 35 U.S.C. § 103 (Emphasis added). The fact that a prior art device could be modified so as to produce the claimed invention is not a basis for an obviousness rejection unless the prior art suggested the desirability of such a modification. *In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion, or incentive supporting the combination. *Carella v. Starlight Archery*, 804 F.2d 135, 231 U.S.P.Q. 644 (Fed. Cir. 1986). In addition, “A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention.” *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 U.S.P.Q. 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). (M.P.E.P. § 2141.02). Moreover, if a “proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious.” MPEP §2143.01.

¹ Applicant respectfully notes that the Examiner introduced new arguments in the Advisory Action that rely upon art references not relied upon in the Final Office Action. As Applicant appeals the decision of the Examiner in the Final Office Action, Applicant does not address Examiner’s subsequently formulated arguments herein.

In approaching this determination, a number of inquiries are made as primary considerations: (1) the scope and content of the prior art are determined; (2) the differences between the prior art and the claims at issue are ascertained; and (3) the level of ordinary skill in the pertinent art is resolved. *Graham v. John Deere Company*, 383 U.S. 1, 16, 148 U.S.P.Q. 459, 467 (1966). It is important that the proper perspective be used in considering the invention in view of the prior art while conducting the obviousness/nonobviousness analysis. It is improper for an Examiner to use hindsight having read the Applicant's disclosure to arrive at an obviousness rejection. *In re Fine*, 837 F.2d 1071, 1075, 5 U.S.P.Q. 2d 1596, 1600 (Fed. Cir. 1988). It is improper to use the claimed invention as an instruction manual or template to piece together the teachings of the prior art so that the claimed invention is rendered obvious. *In re Fritch*, 972 F.2d 1260, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992).

B. Group 1 – Claims 1, 4-5, 7, 10-12, 14, 16, and 18-19.

Claim 1 recites, in part, "A system for communicating management information, comprising . . . a first interface card . . . a second interface card . . . and a management card coupled to the first interface card and the second interface card; the management card operable to . . . establish a communication link between a client and a particular one of the first interface card and the second interface card selected in response to a command communicated by the client . . . and communicate management information using the communication link." The *Horn-Mitchell* combination fails to teach, suggest, or disclose the combination of limitations specifically recited in Claim 1.

At the outset, Applicant respectfully submits that the *Horn-Mitchell* combination is improper. The Examiner's primary reference – *Horn* – specifically teaches away from relevant aspects of Claim 1. A prior art reference must be considered in its entirety, including portions that would lead away from the claimed invention. M.P.E.P. § 2141.02. Applicant asserts that *Horn* specifically teaches away from a "management card operable to establish a communication link between a client and a particular one of the first interface card and the second interface card selected in response to a command communicated by the client," as recited in Claim 1. In particular, the network connection that is established in *Horn* is between network cards 18 and some external network node. (*Horn*; col. 3, ll. 36-38

and 52-54). Yet, the connection is made in response to a request communicated by "application 30," not by the external network node with which the connection is made. "The Application 30 requests a single network connection from the interface 20. The interface 20 passes this request to the network manager 22. In response to the request the network manager 22 prepares at least two of the protocol stacks 24 to establish a network connection." (*Horn*; col. 5, ll. 23-29). By requiring "application 30" to make the request for a network connection, the network connection establishment techniques of *Horn* teach away from a "management card operable to . . . establish a communication link between a client and a particular one of the first interface card and the second interface card selected in response to a command communicated by the client," as recited in Claim 1.

Even if the *Horn-Mitchell* combination is proper – which Applicant respectfully traverses – the *Horn-Mitchell* combination still fails to teach, suggest, or disclose various elements of Claim 1. Applicant has previously traversed the Examiner's position that *Horn* discloses a "management card." Instead, the cited portions of *Horn* disclose traditional network cards such as "network cards 604, 606, 608, and 610" (Figure 14, col. 9, ll. 2-14). These "network cards 604, 606, 608, and 610" simply connect with each other using, for example, an Ethernet network or some other independent network. Significantly, none of these "network cards 604, 606, 608, and 610" perform any sort of management operation – much less the management operations recited in Claim 1 – and, therefore, do not teach, suggest, or disclose a "management card" as recited, in Claim 1. At any rate, the Examiner relies upon *Mitchell* to reject various aspects regarding the "management card" of Claim 1.

As to *Mitchell*, Applicant respectfully submits that the Examiner misunderstands various aspects of *Mitchell*. In particular, the Examiner initially relies upon a "management card" of *Mitchell* that includes a "reset push button 32" and "status display 34" in order to "manage reset lines that are dedicated to individual cards." (*Mitchell*; col. 4, ll. 8-14). Applicant respectfully submits that *Mitchell* fails disclose its "management card" as being "operable to . . . establish a communication link between a client and a particular one of the first interface card and the second interface card selected in response to a command communicated by the client" and "operable to . . . communicate management information using the communication link" as recited, in part, in Claim 1. The Examiner fails to consider these elements of Claim 1 for patentability. This is impermissible. "All words in a claim

must be considered in judging the patentability of that claim against the prior art." M.P.E.P. § 2143.03. Indeed, the "management card" of *Mitchell* is simply unable to perform the functions recited above. On the contrary, the "management card" of *Mitchell* is limited to performing the "shutdown and reset operations" of "embedded system 10." (*Mitchell*; Abstract). These "shutdown and reset operations" in no way involve establishing "a communication link between a client and a particular one of the first interface card and the second interface card selected in response to a command communicated by the client" and communicating "management information using the communication link" as recited, in part, in Claim 1.

It appears that the Examiner simply performs a keyword search of the phrase "management card" recited in Claim 1, and then relies upon the mere mention of a "management card" within *Mitchell* that is simply unable to "establish a communication link between a client and a particular one of the first interface card and the second interface card selected in response to a command communicated by the client" and "communicate management information using the communication link" as recited, in part, in Claim 1.

The "management card" of *Mitchell* actually teaches away from various elements of Claim 1. The Manual of Patent Examining Procedure (hereinafter "the MPEP") states that "[a] prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention." MPEP § 2141.02. By shutting down the operating system and resetting the embedded system hardware (*Mitchell*; col. 2, ll. 38-46), the "management card" of *Mitchell* effectively **destroys** existing communication links. In this regard, *Mitchell* actually teaches away from a "management card . . . operable to **establish** a communication link," as recited, in part, in Claim 1. The Examiner claims that the "shutting-down and resetting capability . . . has nothing to do with disconnecting the communication." (Final Office Action, p. 7, ¶ 17). In the very next sentence, however, the Examiner admits that shutting down a system involves taking the system "offline." (Final Office Action, p. 7, ¶ 17). Applicant respectfully submits that taking a system "offline" by shutting down and resetting the operating system and the embedded system hardware suggests to one of skill in the art to disconnect communication links. At the very least, a system that is being "shutdown and reset" suggests against establishing a communication link.

Moreover, *Mitchell* specifically states that the “novelty of the present invention is believed to be in gracefully shutting down and resetting the **embedded system**.” (*Mitchell*; col. 4, ll. 58-60; emphasis added). The embedded system 10 of *Mitchell* includes “embedded application 20” (see, e.g., *Mitchell* - FIGURE 1) which in turn includes each of the cards 22-27 (see, e.g., *Mitchell* - FIGURE 2). This means that by “shutting down and resetting the embedded system,” *Mitchell* shuts down and resets each of the cards 22-27 of embedded application 20. Such a shutdown and reset of cards 22-27 suggests disconnecting any communication links associated with cards 22-27. The embedded system 10 of *Mitchell* also includes “computing engine 30” which is coupled to “network interface 40” (See, e.g., *Mitchell* - FIGURES 2 and 3). This means that by “shutting down and resetting the embedded system,” *Mitchell* shuts down and resets “computing engine 30”. Such a shutdown and reset of “computing engine 30” suggests disconnecting any communication links facilitated by “computing engine 30.” In this regard, *Mitchell* specifically teaches away from Claim 1.

Perhaps realizing that the “management card” of *Mitchell* fails to teach, suggest, or disclose the various elements of Claim 1, the Examiner then relies upon the “gateway card 50” of *Mitchell* to reject the “management card” of Claim 1. In particular, the Examiner argues that the “gateway card 50” of *Mitchell* “performs protocol processing and the placing the calls on a LAN/WAN.” (Final Office Action, p. 7, ¶ 18). Applicant respectfully submits that the “gateway card 50” of *Mitchell* also fails to teach, suggest, or disclose the “management card” of Claim 1.

First, nowhere does *Mitchell* describe the “gateway card 50” as being operable to “establish a communication link between a client and a particular one of the first interface card and the second interface card selected **in response to a command communicated by the client**,” as recited in Claim 1. The Examiner claims that “LAN/WAN are combinations of Clients and Servers. Clients consist of processor who send the request.” (Final Office Action, p. 7, ¶ 18). Significantly, however, the Examiner fails to identify any portion of *Mitchell* that suggests the communication of a request by any portion of the “LAN/WAN”. Therefore, even though the Examiner equates the “LAN/WAN” of *Mitchell* to the “client” recited in Claim 1, the Examiner simply fails to identify any sort of “command communicated by the client.”

Moreover, the Examiner's reliance upon the "LAN/WAN" of *Mitchell* to teach a "client" of Claim 1 is inconsistent with the teachings of *Horn*. As discussed above, *Horn* teaches an "application 30" that requests a network connection. (*Horn*; col. 5, ll. 23-25). The Examiner claims, however, that the "LAN/WAN" of *Mitchell* "send the request." (Final Office Action, p. 7, ¶ 18). Therefore, by combining *Horn* with *Mitchell*, the Examiner is proposing the modification of *Horn* with the teachings of *Mitchell*. If a "proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious." MPEP §2143.01. Applicant respectfully submits that the principle of operation of *Horn*, which requires the "application 30" to request the network connection, would be changed by the proposed combination with *Mitchell* – which according to the Examiner requires the "LAN/WAN" to "send the request". Thus, even though the Applicant disagrees with the Examiner's interpretation of *Mitchell*, even if the Examiner's interpretation of *Mitchell* were accurate it would change the principle of operation of *Horn*. The Examiner therefore fails to establish a *prima facie* case of obviousness.

Second, nowhere does *Mitchell* describe the "gateway card 50" as being operable to "communicate management information using the communication link" as recited, in part, in Claim 1. Indeed, the management operations of *Mitchell* – despite the fact that they are limited to shutdown and reset operations unrelated to the elements of Claim 1 – are handled by the "management card" of *Mitchell* (e.g., reset button 32 and status display 34), not by the "gateway card 50". Therefore, the "gateway card 50" has no reason to – and indeed does not – "communicate management information." Therefore, neither the "management card" nor the "gateway card 50" of *Mitchell* teach, suggest, or disclose the "management card operable to ... establish a communication link between a client and a particular one of the first interface card and the second interface card selected in response to a command communicated by the client ... and communicate management information using the communication link" as recited, in part, in Claim 1.

The Examiner's primary reference, *Horn*, specifically teaches away from Claim 1. The Examiner's secondary reference, *Mitchell*, specifically teaches away from Claim 1. The modification of the primary reference by the secondary reference changes the principle of

operation of the primary reference. Finally, the proposed *Horn-Mitchell* combination fails to teach, suggest, or disclose the combination of limitations specifically recited in Claim 1. Given these shortcomings of the cited art, the Examiner has failed to establish a *prima facie* case of obviousness under 35 U.S.C. § 103.

C. Group 2 – Claims 2, 8, and 15.

Claim 2 recites, in part, “wherein the management card comprises . . . a switch operable to establish the communication link between the client and one of a first port and a second port of the management card . . . a memory operable to store mapping information associating the first port with the first interface card and the second port with the second interface card . . . and a processor coupled to the memory and the switch, the processor operable to . . . receive the command identifying a particular interface card . . . determine the port associated with the particular interface card using the mapping information . . . and command the switch to establish the communication link between the client and the determined port.” The Examiner acknowledges that the *Horn-Mitchell* combination fails to teach, suggest, or disclose these aspects of Claim 2. (Final Office Action, p. 4, ¶ 11). The Examiner therefore relies upon *Latif* to reject these aspects of Claim 2. The Examiner’s reliance upon *Latif* is misplaced.

At the outset, the Examiner fails to consider each and every limitation of Claim 2. “All words in a claim must be considered in judging the patentability of that claim against the prior art.” M.P.E.P. § 2143.03. In particular, Claim 2 recites, in part, “wherein the **management card** comprises . . . a switch . . . a memory . . . and a processor.” *Latif* simply fails to consider a “management card.” For example, the switch 140 of *Latif* is located “within network 110” (*Latif*; col. 6, ll. 13-17) not as a part of a “management card” as recited in Claim 2. In this regard, switch 140 of *Latif* is nothing more than a traditional network switch. (*Latif*; col. 6, ll. 31-35). Nevertheless, the Examiner argues that the “NIC of *Latif*’s reference does have the management capability.” (Final Office Action, p. 8, ¶ 23). The Examiner is mistaken. The cited portion of *Latif* is limited to using an “NIC driver for managing loads over the multi-port NIC...” (*Latif*; col. 5, ll. 1-3). Therefore, it is the “NIC driver” of *Latif* – not the NIC – that has management capability if at all. As a result, the

Examiner's reliance upon traditional "network switches" and their "built in interface card slots" is misplaced.

Claim 2 further recites, in part, "wherein the management card comprises . . . a switch operable to establish the communication link between the client and one of a first port and a second port **of the management card.**" The traditional network switch 140 of *Latif* transmits data from one of multiple ports **of a particular NIC** to a host. (*Latif*, col. 6, ll. 47-67), but simply fails to establish a communication link between a client and a port "**of the management card.**" Claim 2 further recites, "a processor . . . operable to . . . receive the command identifying a particular interface card." The cited portions of *Latif* simply fail to disclose such a "command identifying a particular interface card." (*Latif*, col. 6, ll. 13-67). For at least these reasons, Applicant respectfully submits that the *Horn-Mitchell-Latif* combination fails to teach, suggest, or disclose the combination of limitations specifically recited in Claim 2.

D. Group 3 – Claims 3, 6, 9, 13, 17, and 20.

The *Horn-Mitchell* combination fails to teach, suggest, or disclose a "processor . . . operable to **configure the management information** for the operating system of the network device associated with the particular interface card," as recited, in part, in Claim 3. The Examiner cites the "programmable logic device" ("PLD") of *Mitchell* (*Mitchell*; col. 6, ll. 66-67 and col. 7, ll. 1-10) to reject Claim 3. (Final Office Action, p. 3, ¶ 3). However, the cited portions of *Mitchell* offer no information regarding configuring "management information." Instead, the cited portions merely state that the "PLD may be programmed to implement a state machine," and that the "state machine . . . may be implemented using . . . software" such as software written in "VHDL." (*Mitchell*; col. 7, ll. 3-10). Such an implementation of a state machine using software fails to teach, suggest, or disclose configuring "management information."

The Examiner states that the "*Mitchell* reference does go into configuring of the system through interface card that is similar to programming the state machine (col. 7, ll. 3-10). "Configuring" and "programming" are just two different words with the same meaning." (Final Office Action, p. 7, ¶ 20). Applicant respectfully traverses the Examiner's position. Whether or not "configuring" and "programming" mean the same

thing, the functionality of the “programming” efforts of *Mitchell* are not the same as those recited in Claim 3. In particular, *Mitchell* is limited to a “programmable logic device that may be programmed to perform the **functions of the shutdown and reset manager 60.**” (*Mitchell*; col. 7, ll. 1-2). The “functions of the shutdown and reset manager 60” have nothing to do with configuring “**the management information** for the operating system of the network device associated with the particular interface card” as recited, in part, in Claim 3.

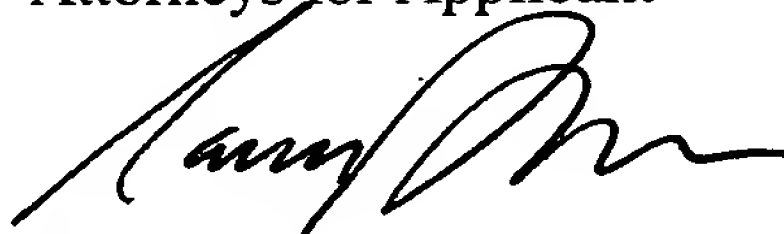
CONCLUSION

Applicant has demonstrated that the present invention as claimed is distinguishable over *Horn*, *Mitchell*, and *Latif*. Therefore, Applicant respectfully requests the Board of Patent Appeals and Interferences to reverse the final rejection of the Examiner and instruct the Examiner to issue a notice of allowance of all claims.

A check in the amount of \$320.00 is attached to cover the statutory filing fee. Although no other fee is believed to be due, the Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts, L.L.P.

Respectfully submitted,

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Enclosures: Appendix A – Claims on Appeal
Appendix B – Copy of U.S. Patent No. 6,192,414 issued to *Horn*
Appendix C – Copy of U.S. Patent No. 6,230,181 issued to *Mitchell*
Appendix D – Copy of U.S. Patent No. 6,393,483 issued to *Latif*